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ABSTRACT

The role of the physical therapist as a member of the educational team working with mainstreamed physically handicapped students is explored. The physical therapist serves as a consultant who participates in planning meetings, develops and prescribes adopted equipment, trains teachers and other team members in transdisciplinary physical therapy skills, and designs treatment for home use. The therapist is also responsible for screening, referral, and for assessment and reevaluation of student progress. The physical therapist instructs teachers on such skills as manuevering wheelchairs and other mobility equipment and utilization of body mechanics principles. When teachers lack these skills they often feel inadequate which often affects a teacher's attitude toward a handicapped child. (PHR)

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Physically Handicapped Children in the Mainstream: A Transdisciplinary Application of Physical Management Techniques

Gay Goodman and Kathleen Yasumura

Historically, the physical therapist has functioned in a hospital setting as part of a medical team. With the advent of P.L. 94-142 and the mainstreaming movement a pressing need has come to exist for physical therapists to be incorporated into the school setting as part of the educational team. The need for physical therapy in the schools is twofold: 1) The physical therapist is needed as a crucial part of the traditional interdisciplinary team working to improve the educational environment for the handicapped child. 2) A second role has also emerged. This second role casts the physical therapist as an integral source for developing transdisciplinary physical therapy skills in other professionals who will be working with physically handicapped children in the classroom, or school setting.

As an interdisciplinary team member, the physical therapist has a multifaceted role. She serves as a consultant who participates in ARD and I.E.P. meetings, develops and prescribes adapted equipment, trains teachers and other team members in transdisciplinary physical therapy skills, and designs treatment for use in the home. As a diagnostician, she is responsible for screening children for referral to physical therapy services, for assessing functional status and daily living skills and for assessment and reevaluation of student progress. In the role of environmental analyst, the physical therapist must determine the status of school building accessibility, classroom environment and curriculum adjustments which are necessary in meeting the requirements of a child's education in the least restrictive alternative environment. Finally, the physical therapist functions in the more traditional role of the clinician in designing treatment programs for implementation in the schools and delivering physical rehabilitation services to the handicapped student. It is of vital importance

that teachers, principals and other members of the interdisciplinary team become aware of and utilize the variety of services available to handicapped children through the physical therapist.

Due to the unique needs of the physically handicapped child, the physical therapist cannot function in isolation. Sound physical therapy skills are needed by all professionals who participate in the delivery of educational services. While the physical therapist may be responsible for establishing rehabilitation programs, skills in physical therapy are also necessary in helping the child adapt to the educational environment in both the social and academic realm. As a result, physical therapy is called upon to deliver a transdisciplinary set of skills which can be acquired by teachers and employed on a minute to minute basis in the classroom.

Three major transdisciplinary physical therapy skills which those members involved in the care of a handicapped child must acquire to improve the physical management of the child are:

1) Physical management techniques in positioning and handling of both oneself and the physically handicapped individual;
2) Techniques for maneuvering wheelchairs and other mobility equipment; and
3) Utilization of appropriate equipment to mobilize the physically handicapped.

It is important that a solid foundation be established in the principles and techniques of proper body mechanics because these principles exert a considerable impact on:

1) the attitudes of both the physically handicapped and those who participate in any aspect of the physical management;
2) the positioning and handling of the wheelchair bound child or the child requiring assistance and assistive devices for ambulation;

3) the educator's plan for the child's curricular direction; and

4) the child's overall performance.

Many individuals within the normal adult populace experience low back conditions at some point in their lives. The physically handicapped child is just as susceptible to low back problems due to the long term mechanical stress on the involved or vulnerable joints. Therefore, good body mechanics must be encouraged in the intervention and training programs established for both the physically handicapped child and the child's physical manager, respectively.

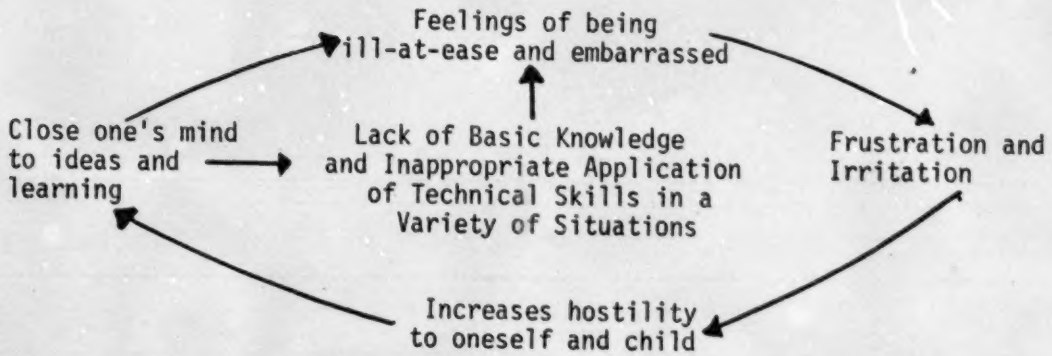
The major body mechanics principles which must be utilized include the ability to: plan ahead, assess the situation and the individual to be managed, establish a stable base of support, consistently bend at the knees and use muscle power of the legs to pick up an object, incorporate the weight lifted into body mass, use smooth, slow motions to lift, keep the back as nearly straight as possible, avoid twisting motions of the body and utilize "team" lift or a mechanical lifting device when necessary.

The acquisition of the prerequisite skills to maintain good body mechanics in handling and positioning a physically handicapped child and the mastery of techniques for maneuvering wheelchairs and other mobility equipment maximizes the fluidity in performing these arduous tasks. In addition, by incorporating these principles, stresses associated with the bending, lifting and carrying of heavy objects are minimized. Demonstration of efficient techniques in ascending and descending ramps, curbs and steps with a wheelchair are facilitated with the use of good body mechanics. Knowledge of standing, sitting and lifting transfer techniques also requires the appropriate application of proper body mechanics principles. To promote the effective mobilization of a physically handicapped child in transfer activities, the utilization of a sliding board or hoyer lift, as well as awareness of specific wheelchair features is mandatory.

Application and practice of body mechanics principles is just one aspect of physical management and handling of the child which is the essence of good therapeutic technique for both the child and for those involved with his/her care. Inadequate and/or inappropriate knowledge and confidence in one's ability to manage a physically handicapped child gives rise to a vicious cycle. This cycle may influence an individual's attitude toward the child, as well as the child's feelings and attitudes about himself. (See Figure 1 below.)

Figure 1

"Attitudinal Barrier Cycle"



If the professional responsible for handling the handicapped child becomes locked into this cycle, the attitudinal barrier increases and presents what may appear to be an insurmountable obstacle. However, by recognizing the components in the vicious cycle, it is possible to initiate a process for reversing the negative effects stemming from a basic lack of knowledge and technique.

Another vicious cycle which arises from the lack of knowledge and inappropriate application of body mechanics principles and techniques influences attitudes revolving around the "pain cycle." (See Figure 2 below.)

Figure 2

"Pain Cycle"

Misjudgement of our Strength and/or situation
Poor disposition: irritability and hostility
Inappropriate Application of Body Mechanics: Principles and/or Techniques
Strain placed on musculature and ligaments
Pain and Discomfort radiating from back to other body parts

With the enusing introduction to and application of body mechanics principles pragmatic measures can be taken to extinguish this ongoing pattern. Review and application of the major principles of body mechanics in lifting, transferring and maneuvering the wheelchair; emphasis on optimal postural alignment in various positions and situations; and introduction to basic components of the wheelchair and transfer equipment (i.e. sliding board and hoyer lift) are initial steps in eliminating the pain cycle. Effectiveness of these principles in the physical management of the child will be contingent upon each person's prudent application of them in various circumstances.